

CLUB DRUGS:

Community Drug Alert Bulletin



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Club Drugs

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Dear Colleague;

A number of our Nation's best monitoring mechanisms are detecting alarming increases in the popularity of some very dangerous substances known collectively as "club drugs." This term refers to drugs being used by young adults at all-night dance parties such as "raves" or "trances," dance clubs, and bars.

MDMA (Ecstasy), GHB, Rohypnol, ketamine, methamphetamine, and LSD are some of the club or party drugs gaining popularity. NIDA-supported research has shown that use of club drugs can cause serious health problems and, in some cases, even death. Used in combination with alcohol, these drugs can be

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even more dangerous. Thus, we are issuing this alert to aid communities in identifying and responding to this threat to the health and safety of their young people.

"Club drug" is a vague term that refers to a wide variety of drugs. Uncertainties about the drug sources, pharmacological agents, chemicals used to manufacture them, and possible contaminants make it difficult to determine toxicity, consequences, and symptoms that might be expected in a particular community. The information in this alert will be useful, whatever the local situation.

No club drug is benign. Chronic abuse of MDMA, for example, appears to produce long-term damage to serotonin-containing neurons in the brain. Given the important role that the neurotransmitter serotonin plays in regulating emotion, memory, sleep, pain, and higher order cognitive processes, it is likely that MDMA use can cause a variety of behavioral and cognitive consequences as well as impairing memory.

Because some club drugs are colorless, tasteless, and odorless, they can be added unobtrusively to beverages by individuals who want to intoxicate or sedate others. In recent years, there has been an increase in reports of club drugs used to commit sexual assaults - yet another reason why NIDA is alerting you to these escalating trends.

What follows is an overview of the scientific data we have on several of the most prevalent club drugs. Because many of these drug-use trends are still emerging, some of the data presented here are preliminary.

However, we feel obliged to share what we know now, to provide

whatever help we can to you and your community as you anticipate or respond to club drug-related problems. We also will be increasing our research efforts on club drugs to better understand how they act on the brain and how they produce their behavioral effects. And we will facilitate the development of treatment and prevention strategies targeted to the populations that abuse club drugs. As new research emerges, NIDA will continue to disseminate findings to you quickly. Toward this end, we are establishing a web site to provide scientific information about club drugs - www.clubdrugs.org. We hope this information will be helpful as you combat drug use in your own community.

Sincerely,

Alan I. Leshner, Ph.D.
Director

Some Facts About Club Drugs

Methylenedioxyamphetamine (MDMA)

Slang or Street Names: ***Ecstasy, XTC, X, Adam, Clarity, Lover's Speed***

MDMA was developed and patented in the early 1900's as a chemical precursor in the synthesis of pharmaceuticals. Chemically, MDMA is similar to the stimulant amphetamine and the hallucinogen mescaline. MDMA can produce both stimulant and psychedelic effects.

- Methylenedioxyamphetamine (MDA) and methylenedioxyethylamphetamine (MDEA) are drugs chemically similar to MDMA.
- MDMA is taken orally, usually in a tablet or a capsule. MDMA's effects last approximately 3 to 6 hours, though confusion, depression, sleep problems, anxiety, and paranoia have been reported to occur even weeks after the drug is taken.
- MDMA can produce a significant increase in heart rate and blood pressure and a sense of alertness like that associated with amphetamine use.
- The stimulant effects of MDMA, which enable users to dance for extended periods, may also lead to dehydration, hypertension, and heart or kidney failure.

MDMA can be extremely dangerous in high doses. It can cause a marked increase in body temperature (malignant hyperthermia) leading to the muscle breakdown and kidney and cardiovascular system failure reported in some fatal cases at raves. MDMA use may also lead to heart attacks, strokes, and seizures in some users.

MDMA is neurotoxic. Chronic use of MDMA was found, first in laboratory animals and more recently in humans, to produce long-lasting, perhaps permanent, damage to the neurons that release serotonin, and consequent memory impairment.

*MDMA use has been reported across the country, including many of the 21 cities that comprise NIDA's Community Epidemiology Work Group (CEWG), a network of researchers that provide ongoing community-level surveillance of drug abuse. CEWG cities in which MDMA use has been reported include: Chicago, Denver, Miami, Atlanta, New Orleans, San Francisco, Austin, Seattle, Boston, Detroit, New York, St. Louis, Dallas, and Washington, D.C.

Gamma-hydroxybutyrate (GHB)

Slang or Street Names: ***Grievous Bodily Harm, G, Liquid Ecstasy, Georgia Home Boy***

GHB can be produced in clear liquid, white powder, tablet, and capsule forms, and it is often used in combination with alcohol, making it even more dangerous. GHB has been increasingly involved in poisonings, overdoses, "date rapes," and fatalities. The drug is used predominantly by adolescents and young adults, often when they attend nightclubs and raves. GHB is often manufactured in homes with recipes and ingredients found and purchased on the Internet.

- GHB is usually abused either for its intoxicating/sedative/euphoriant properties or for its growth hormone-releasing effects, which can build muscles.
- Some individuals are synthesizing GHB in home laboratories. Ingredients in GHB, gamma-butyrolactone (GBL) and 1,4-butanediol, can also be converted by the body into GHB. These ingredients are found in a number of dietary supplements available in health food stores and gymnasiums to induce sleep, build muscles, and enhance sexual performance.
- GHB is a central nervous system depressant that can relax or sedate the body. At higher doses it can slow breathing and heart rate to dangerous levels.
- GHB's intoxicating effects begin 10 to 20 minutes after the drug is taken. The effects typically last up to 4 hours, depending on the dosage. At lower doses, GHB can relieve anxiety and produce relaxation; however, as the dose increases, the sedative effects may result in sleep and eventual coma or death.
- Overdose of GHB can occur rather quickly, and the signs are similar to those of other sedatives: drowsiness, nausea, vomiting, headache, loss of consciousness, loss of reflexes, impaired breathing, and ultimately death.
- GHB is cleared from the body relatively quickly, so it is sometimes difficult to detect in emergency rooms and other treatment facilities.

**CEWG cities in which GHB use has been reported include: Detroit, Phoenix, Honolulu, Miami, New York, Atlanta, Minneapolis/St. Paul, Dallas, Seattle, San Francisco, San Diego, New Orleans, Newark, Los Angeles, Baltimore, Boston, and Denver.*

Ketamine

Slang or Street Names: ***Special K, K, Vitamin K, Cat Valiums***

Ketamine is an injectable anesthetic that has been approved for both human and animal use in medical settings since 1970. About 90 percent of the ketamine legally sold today is intended for veterinary use.

- Ketamine gained popularity for abuse in the 1980s, when it was realized that large doses cause reactions similar to those associated with use of phencyclidine (PCP), such as dream-like states and hallucinations.
- Ketamine is produced in liquid form or as a white powder that is often snorted or smoked with marijuana or tobacco products. In some cities (Boston, New Orleans, and Minneapolis/St. Paul, for example), ketamine is reportedly being injected intramuscularly.
- At higher doses, ketamine can cause delirium, amnesia, impaired motor function, high blood pressure, depression, and potentially fatal respiratory problems.
- Low-dose intoxication from ketamine results in impaired attention, learning ability, and memory.

**CEWG cities in which Ketamine use has been reported include: Seattle, Miami, New York, Chicago, Minneapolis/St. Paul, Newark, Boston, Detroit, New Orleans, and San Diego.*

Rohypnol

Slang or Street Names: ***Roofies, Rophies, Roche, Forget-me Pill***

Rohypnol® (flunitrazepam) belongs to the class of drugs known as benzodiazepines (such as Valium®, Halcion®, Xanax®, and Versed®). It is not approved for prescription use in the United States, although it is approved in Europe and is used in more than 60 countries as a treatment for insomnia, as a sedative, and as a presurgery anesthetic.

- Rohypnol is tasteless and odorless, and it dissolves easily in carbonated beverages. The sedative and toxic effects of Rohypnol are aggravated by concurrent use of alcohol. Even without alcohol, a dose of Rohypnol as small as 1 mg can impair a victim for 8 to 12 hours.
- Rohypnol is usually taken orally, although there are reports that it can be ground up and snorted.
- The drug can cause profound "anterograde amnesia"; that is, individuals may not remember events they experienced while under the effects of the drug. This may be why one of the street names for Rohypnol is "the forget-me pill" and it has been reportedly used in sexual assaults.
- Other adverse effects associated with Rohypnol include decreased blood pressure, drowsiness, visual disturbances, dizziness, confusion, gastrointestinal disturbances, and urinary retention.

**CEWG cities in which Rohypnol use has been reported include: Miami, Houston, and along the Texas-Mexico border.*

Methamphetamine

Slang or Street Names: ***Speed, Ice, Chalk, Meth, Crystal, Crank, Fire, Glass***

Methamphetamine is a toxic, addictive stimulant that affects many areas of the central nervous system. The drug is often made in clandestine laboratories from relatively inexpensive over-the-counter ingredients. It is being used by diverse groups, including young adults who attend raves, in many regions of the country.

Available in many forms, methamphetamine can be smoked, snorted, injected, or orally ingested.

- Methamphetamine is a white, odorless, bitter-tasting crystalline powder that easily dissolves in beverages.
- Methamphetamine is not sold in the same way as many other illicit drugs; it is typically sold through networks, not on the street.
- Methamphetamine use is associated with serious health consequences, including memory loss, aggression, violence, psychotic behavior, and potential cardiac and neurological damage.

- Methamphetamine abusers typically display signs of agitation, excited speech, decreased appetite, and increased physical activity levels.
- Methamphetamine is neurotoxic. Methamphetamine abusers may have significant reductions in dopamine transporters.
- Methamphetamine use can contribute to higher rates of transmission of infectious diseases, especially hepatitis and HIV/AIDS.

**CEWG cities in which Methamphetamine use has been reported include: San Diego, San Francisco, Phoenix, Atlanta, St. Louis, Denver, Honolulu, Los Angeles, Minneapolis/St. Paul, Philadelphia, Seattle, Dallas, and many rural regions of the country.*

Lysergic Acid Diethylamide (LSD)

Slang or Street Names: *Acid, Boomers, Yellow Sunshines*

LSD is a hallucinogen. It induces abnormalities in sensory perceptions. The effects of LSD are unpredictable depending on the amount taken, on the surroundings in which the drug is used, and on the user's personality, mood, and expectations.

- LSD is typically taken by mouth. It is sold in tablet, capsule, and liquid forms as well as in pieces of blotter paper that have absorbed the drug.
- Typically an LSD user feels the effects of the drug 30 to 90 minutes after taking it. The physical effects include dilated pupils, higher body temperature, increased heart rate and blood pressure, sweating, loss of appetite, sleeplessness, dry mouth, and tremors.
- LSD users report numbness, weakness, or trembling, and nausea is common.
- There are two long-term disorders associated with LSD, persistent psychosis and hallucinogen persisting perception disorder (which used to be called "flashbacks").

**CEWG cities in which LSD use has been reported include: Boston, Detroit, Seattle, Chicago, Denver, New Orleans, San Francisco, Atlanta, and Phoenix.*

*Information from NIDA's Community Epidemiology Work Group (CEWG), a network of epidemiologists and researchers from 21 U.S. metropolitan areas who monitor drug use trends.

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